UNITED STATES NAVAL OBSERVATORY

CIRCULAR NO. 13

U. S. Naval Observatory, Washington 25, D. C. February 27, 1950

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS
DECEMBER, 1949 - SUMMARY, 1949

By Lucy T. Day

All measurements and spot counts were made at the Naval Observatory from plates secured either in Washington, or at Mt. Wilson. Difference in longitude is measured from the central meridian, positive toward the west; latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of the sun's hemisphere. For each date at the bottom of the columns headed: Mt. Wilson group number, difference in longitude, latitude, area of spot or group, and spot count are included respectively: number of groups, assumed longitude of the central meridian, assumed latitude of the center of the disk, total area of spots and groups, and total spot count. The date is expressed in Universal Time. The observatory at which the plate was secured and its quality are indicated directly below this date. (NO stands for U. S. Naval Observatory, MW for Mt. Wilson Observatory; and the symbols VG, G, F and P mean very good, good, fair and poor respectively.) Spots not assigned a number at Mt. Wilson are indicated by an asterisk. Corresponding data were published in the Monthly Weather Review from February 1927 to December 1947. Since December 31, 1947 they are published monthly in this series of circulars.

Date U.T.	Mount Wilson group No.	Heliographic Difference in longitude	Heliographic Latitude	Distance from center of disk	Area of spot or group	Spot count
Dec.		o	o	o		
1.633	10138	−60	− 7	60	48	4
N O-G	10137	−49	−12	51	170	1
	10135	−47	+23	51	12	1
	10135	−43	+23	47	194	2
	10133	−36	+25	42	339	8
	10136	−27	−16	33	24	6
	10136	−23	−16	28	73	3
	10132	−21	+10	22	48	5
	10130	− 7	+25	25	48	4
	10130	+ 1	+24	23	24	1
	10127	+ 8	+11	13	24	1
	10131	+33	−10	34	121	7
	10131	+38	− 8	39	97	4
	10123	+34	+ 5	34	48	1
	10128	+49	−10	50	12	1
	10134	+50	−32	57	48	5
	10119	+63	+19	63	727	1
	(13)	(244)	(+1)		2,057	55
2.759	10137	−35	−11	36	206	1
N O-F	10135	−32	+24	38	12	1
	10135	−29	+23	35	145	2
	10133	−23	+26	32	24	3
	10133	−22	+25	32	170	5
	10133	−20	+25	31	194	2
	10136	−12	−15	19	36	1
	10136	− 8	−15	18	36	3
	10130	+ 8	+25	25	36	1
	10130	+16	+24	28	24	1
	10127	+22	+11	23	48	3
	10123	+48	+ 5	48	48	1
	10131	+50	−10	51	242	10
	10119	+77	+19	77	630	1
	(9)	(230)	(+1)		1,851	35
3.738	10141	−63	− 7	63	48	2
N O-G	10141	−60	− 7	60	73	3
	10135	−23	+28	36	24	10
	10135	−17	+23	28	170	2
	10137	−21	−11	24	170	1
	10140	− 9	+21	22	12	3
	10133	− 9	+25	25	194	5
	10133	− 8	+27	27	12	2
	10136	+ 2	−16	17	73	8
	10139	+ 6	+22	21	48	5
	10130	+21	+24	31	12	1
	10131	+60	−12	61	97	4
	10131	+66	−10	66	291	3
	10123	+61	+ 5	61	48	1
	(10)	(217)	(+1)		1,272	50
4.623	10142	−77	+18	78	194	1
N O-F	10141	−49	− 8	49	242	7
	10141	−47	− 8	47	97	1
	10137	− 9	−11	14	170	1
	10135	− 5	+23	24	73	1
	10140	+ 1	+20	20	61	1
	10133	+ 1	+23	23	97	2
	10133	+ 5	+24	25	109	1
	10136	+14	−16	20	48	3
	10139	+15	+22	27	24	1
	10139	+17	+23	29	24	1
	10123	+71	+ 5	71	48	1
	10131	+73	−10	73	97	1
	10131	+77	− 8	77	291	4
	(10)	(205)	(0)		1,575	26
5.741	10146	−68	− 1	68	12	1
N O-F	10145	−67	− 7	67	48	1
	10145	−60	− 7	60	24	1
	10142	−63	+17	65	145	1
	10141	−37	− 8	38	242	2
	10141	−35	− 7	36	48	5
	10141	−32	− 8	33	109	3
	10135	+ 1	+25	25	24	2
	10135	+ 9	+23	25	170	2
	10137	+ 5	−11	12	170	1
	10140	+15	+20	25	61	2
	10133	+17	+25	31	145	2
	10133	+20	+22	30	170	15
	10144	+30	+ 8	31	12	1
	10143	+53	+23	57	24	3
	(10)	(190)	(0)		1,404	42
6.644	10148	−67	−10	67	6	1
N O-F	10147	−55	+13	57	12	2
	10146	−54	− 1	54	6	1
	10145	−53	− 6	53	36	2
	10145	−47	− 6	47	36	1
	10142	−49	+18	51	145	1
	10141	−25	− 7	27	218	2
	10141	−21	− 8	23	48	5
	10141	−19	− 8	21	61	1
	10141	−17	− 7	19	97	4
	10135	+13	+25	28	73	10
	10135	+21	+23	31	24	6
	10135	+22	+22	32	145	2
	10137	+18	−11	21	194	1
	10140	+27	+21	33	24	1
	10140	+31	+19	36	12	1
	10133	+30	+25	38	97	2
	10133	+33	+22	40	121	5
	10133	+40	+22	45	61	2
	10144	+45	+ 8	46	12	1
	10143	+66	+23	68	12	3
	(12)	(178)	(0)		1,440	54
7.628	10142	−49	+20	52	12	2
N O-F	10142	−37	+17	41	242	3
	10145	−44	− 6	44	97	2

Date U.T. Dec.	Mount Wilson group No.	Heliographic Difference in longitude	Heliographic Latitude	Distance from center of disk	Area of spot or group	Spot count
		o	o	o		
	10145	−40	− 7	41	121	3
	10145	−35	− 7	36	97	2
	10147	−41	+12	43	73	2
	10141	−12	− 7	13	242	3
	10141	− 3	− 7	8	97	2
	10135	+30	+23	37	36	1
	10135	+33	+23	40	170	6
	10137	+30	−10	32	145	1
	10133	+41	+25	47	121	3
	10133	+47	+22	51	145	5
	10133	+53	+22	57	194	4
	(7)	(165)	(0)		1,792	39
8.629	10145	−30	− 7	32	121	8
N O-F	10145	−28	− 7	29	218	5
	10145	−22	− 7	23	194	4
	10147	−29	+12	32	48	2
	10142	−23	+17	29	170	6
	10141	+ 1	− 7	7	242	6
	10141	+ 7	− 9	12	24	9
	10141	+10	− 7	13	73	3
	10135	+40	+24	45	145	6
	10135	+47	+22	52	170	4
	10137	+43	−10	44	121	1
	10133	+55	+24	59	145	4
	10133	+60	+22	62	194	8
	10133	+67	+22	69	267	1
	(7)	(152)	(0)		2,132	67
9.638	10142	−19	+17	25	48	1
N O-F	10142	−11	+16	19	73	6
	10142	−10	+18	21	145	1
	10142	−10	+13	15	12	1
	10145	−17	− 7	20	97	7
	10145	−12	− 7	15	218	6
	10145	− 7	− 7	11	97	1
	10147	−15	+11	19	73	3
	10141	+13	− 7	14	170	5
	10141	+18	− 7	21	73	3
	10141	+22	− 7	23	109	2
	10135	+51	+25	57	145	1
	10135	+59	+23	61	145	2
	10137	+57	−10	58	145	1
	10133	+70	+23	71	291	5
	10133	+78	+22	79	242	2
	(7)	(139)	(0)		2,083	47
10.691	10153	−78	− 6	78	194	1
N O-F	10145	− 6	− 7	10	48	1
	10145	+ 2	− 6	7	218	4
	10145	+ 9	− 6	11	97	1
	10147	− 4	+12	13	48	3
	10147	0	+12	12	48	3
	10142	+ 3	+17	17	36	3
	10142	+ 5	+18	19	121	1
	10142	+ 5	+15	16	24	1
	10141	+27	− 7	28	218	5
	10141	+35	− 7	36	48	1
	10135	+65	+25	68	97	1
	10135	+72	+23	73	145	2
	10137	+70	−10	70	170	1
	(7)	(125)	(0)		1,512	28
11.658	10153	−76	− 7	76	97	2
MW-F	10153	−65	− 6	65	218	2
	10155	−75	+ 8	75	194	1
	10154	−68	−15	69	36	1
	10152	−57	+17	60	16	1
	10142	+ 3	+18	18	24	3
	10142	+17	+17	24	48	4
	10142	+20	+17	27	97	1
	10147	+10	+12	16	36	3
	10147	+13	+12	18	61	7
	10145	+11	− 5	12	24	4
	10145	+15	− 6	16	194	6
	10145	+20	− 6	22	12	1
	10145	+23	− 6	24	97	1
	10141	+40	− 9	41	97	4
	10141	+43	− 7	44	48	6
	10141	+49	− 7	49	24	2
	10151	+57	+26	61	12	1
	10150	+61	+ 6	61	16	1
	10137	+85	−10	85	145	1
	(11)	(112)	(0)		1,496	52
12.664	10153	−63	− 6	63	48	1
MW-F	10153	−59	− 7	59	48	3
	10153	−54	− 6	54	48	3
	10153	−51	− 6	51	170	1
	10155	−63	+ 8	64	61	6
	10155	−61	+ 8	62	194	1
	10154	−55	−15	57	48	1
	10152	−43	+15	46	12	1
	10159	−23	− 4	23	12	2
	10158	− 9	+10	13	36	4
	10145	+22	− 9	23	24	5
	10145	+24	− 6	24	48	9
	10145	+27	− 7	27	170	12
	10145	+37	− 6	37	73	1
	10147	+23	+12	27	24	3
	10147	+27	+12	30	48	6
	10142	+29	+15	32	48	6
	10142	+31	+15	35	12	1
	10142	+33	+17	37	97	1
	10157	+46	+15	48	24	3
	10141	+54	− 7	54	36	7
	10141	+56	− 5	56	24	1
	10156	+60	−13	60	36	5
	(12)	(99)	(−1)		1,341	83

Date U.T. Dec.	Mount Wilson group No.	Heliographic Difference in longitude °	Heliographic Latitude °	Distance from center of disk °	Area of spot or group	Spot count
13.679	10162	−78	+ 5	78	388	6
MW-F	10155	−49	+ 8	50	291	2
	10153	−49	− 6	49	36	2
	10153	−44	− 6	44	24	5
	10153	−37	− 6	37	121	1
	10154	−41	−15	43	12	1
	10160	−30	+11	32	12	3
	10158	+ 6	+10	13	12	1
	10161	+37	+20	41	24	1
	10145	+37	− 6	37	16	1
	10145	+40	− 6	40	145	9
	10145	+50	− 6	50	73	1
	10147	+38	+12	40	36	4
	10147	+40	+12	42	24	3
	10142	+40	+17	43	36	2
	10142	+47	+17	50	61	1
	10157	+60	+16	61	24	1
	10141	+67	− 7	67	48	1
	10156	+72	−14	72	48	1
	(13)	(86)	(−1)		1,431	46
14.640	10162	−67	+ 6	68	339	5
NO-F	10162	−61	+ 7	62	73	1
	10155	−37	+ 8	38	364	2
	10153	−33	− 5	33	48	5
	10153	−24	− 5	24	121	1
	10154	−28	−15	32	24	1
	10161	+48	+21	52	97	4
	10161	+51	+20	55	24	1
	10147	+50	+13	52	48	3
	10147	+52	+13	53	36	1
	10145	+53	− 5	53	24	1
	10145	+64	− 4	64	145	1
	10142	+61	+18	63	73	1
	(8)	(73)	(−1)		1,416	27
15.629	10162	−54	+ 6	54	291	6
NO-F	10162	−48	+ 7	49	48	1
	10155	−24	+ 8	25	388	3
	10153	−19	− 5	19	36	6
	10153	−12	− 5	13	48	4
	10153	−10	− 5	11	145	1
	10154	−18	−15	22	24	3
	10154	−15	−15	20	24	1
	10161	+60	+21	62	48	2
	10147	+63	+13	64	145	4
	10142	+76	+17	78	36	1
	10145	+78	− 4	78	194	1
	(8)	(60)	(−1)		1,427	33
16.672	10166	−68	+ 7	69	24	1
NO-F	10165	−54	+19	56	24	1
	10164	−43	+24	49	48	1
	10162	−39	+ 6	39	339	9
	10162	−34	+ 7	35	48	1
	10155	− 9	+ 8	12	388	3
	10154	− 5	−15	15	12	1
	10153	+ 3	− 5	4	97	1
	10163	+19	+32	37	12	1
	10163	+22	+32	39	24	6
	10161	+74	+21	78	24	1
	(9)	(46)	(−1)		1,040	26
17.727	10165	−42	+19	46	24	2
NO-F	10164	−31	+23	39	36	3
	10164	−28	+19	33	48	1
	10162	−27	+ 8	29	24	7
	10162	−26	+ 5	27	170	3
	10162	−24	+ 5	25	48	1
	10162	−19	+ 5	20	36	1
	10155	+ 3	+ 6	7	12	1
	10155	+ 5	+ 8	11	339	1
	10155	+14	+ 5	15	48	1
	10155	+16	+ 3	17	48	4
	10153	+17	− 5	17	73	1
	10163	+38	+31	49	170	9
	(6)	(32)	(−1)		1,076	35
19.774	10169	-65	+20	68	242	1
NO-G	10166	−28	+ 6	30	12	1
	10164	− 3	+23	25	24	4
	10162	+ 1	+ 6	7	242	10
	10155	+31	+ 7	32	194	1
	10153	+45	− 5	45	61	1
	10163	+61	+32	68	291	5
	10163	+67	+31	71	145	4
	(7)	(5)	(−1)		1,211	27
20.665	10168	−64	− 5	64	12	1
NO-F	10167	−52	+20	56	267	2
	10166	−15	+ 5	16	97	2
	10166	−13	+ 6	17	73	3
	10162	+14	+ 4	14	121	5
	10155	+45	+ 7	47	194	1
	10153	+58	− 5	58	97	1
	10163	+77	+31	78	339	4
	(7)	(354)	(−2)		1,200	19
21.754	10168	−49	− 5	49	6	1
NO-G	10167	−39	+19	42	194	2
	10171	−42	−10	43	24	1
	10170	−25	+13	29	36	2
	10166	− 3	+ 6	8	194	1
	10166	0	+ 7	9	73	3
	10166	+ 3	+ 5	7	170	3
	10169	+22	+20	31	24	2
	10162	+28	+ 4	29	48	3

Date U.T. Dec.	Mount Wilson group No.	Heliographic Difference in longitude °	Heliographic Latitude °	Distance from center of disk °	Area of spot or group	Spot count
	10155	+58	+ 7	59	170	3
	10153	+71	− 6	71	24	1
	(9)	(339)	(−2)		963	22
22.769	10175	−60	+11	61	97	6
N O-G	10175	−56	+12	57	73	1
	10174	−39	− 2	39	24	1
	10168	−34	− 5	34	24	1
	10171	−31	− 9	32	24	1
	10171	−28	− 9	29	24	4
	10167	−26	+19	33	194	1
	10170	−12	+12	18	36	2
	10173	− 8	− 8	11	73	6
	10172	+ 8	− 9	11	24	3
	10166	+12	+ 6	15	194	7
	10166	+15	+ 5	17	12	1
	10166	+17	+ 6	20	170	1
	10155	+70	+ 7	70	97	3
	(10)	(326)	(−2)		1,066	38
23.647	10175	−49	+11	50	242	6
MW-VG	10175	−47	+13	50	24	5
	10175	−44	+12	45	48	13
	10175	−42	+12	43	194	7
	10168	−24	− 4	24	48	7
	10168	−21	− 5	21	6	8
	10171	−16	−10	18	24	8
	10167	−14	+20	26	194	1
	10167	−12	+19	24	24	12
	10167	0	+14	16	12	4
	10173	+ 2	− 9	7	48	7
	10173	+ 5	− 8	7	61	15
	10172	+22	− 9	23	12	2
	10166	+24	+ 5	25	242	15
	10166	+27	+ 5	29	48	9
	10166	+29	+ 5	30	194	1
	(*)	+55	+ 5	55	24	8
	(8)	(314)	(−2)		1,445	128
24.652	10177	−76	+22	78	218	1
N O-G	10176	−75	+33	78	73	1
	10175	−35	+11	37	388	1
	10175	−34	+ 9	35	24	6
	10175	−29	+11	32	145	1
	10168	− 9	− 3	9	194	2
	10168	− 7	− 5	7	242	4
	10171	− 4	− 9	8	48	3
	10167	0	+23	25	12	5
	10167	0	+20	22	194	1
	10167	+ 3	+20	22	12	6
	10173	+15	− 9	16	24	1
	10173	+19	− 8	20	36	2
	10172	+36	− 9	37	12	1
	10166	+37	+ 7	39	145	2
	10166	+39	+ 6	40	48	10
	10166	+41	+ 6	42	145	1
	(9)	(301)	(−2)		1,960	48
25.700	10177	−61	+23	65	267	1
N O-G	10176	−61	+35	68	73	1
	(*)	−40	+32	52	12	5
	10175	−21	+10	24	388	4
	10175	−17	+12	22	73	4
	10175	−13	+10	18	485	1
	10179	− 7	+10	13	48	5
	10168	+ 7	− 4	7	582	7
	10171	+ 9	− 8	12	48	3
	10171	+12	− 9	14	48	2
	10167	+12	+21	26	194	1
	10173	+33	− 6	33	12	4
	10178	+45	+19	49	12	1
	10166	+50	+ 8	51	121	7
	10166	+55	+ 9	56	194	1
	(11)	(287)	(−2)		2,557	47
26.726	10180	−65	+23	68	24	3
MW-F	10176	−49	+36	60	48	1
	10177	−48	+23	53	242	1
	10175	− 8	+11	16	315	8
	10175	− 3	+12	13	48	10
	10175	0	+11	13	436	1
	10179	+ 7	+10	14	36	4
	10168	+20	− 4	20	582	6
	10171	+23	− 9	24	36	2
	10167	+25	+21	34	194	1
	10178	+59	+19	61	6	1
	(*)	+61	−11	61	12	1
	10166	+63	+ 8	64	145	15
	10166	+70	+ 8	70	194	1
	(11)	(274)	(−2)		2,318	55
27.728	10181	−83	+ 4	83	194	1
MW-F	10180	−51	+22	55	73	6
	10176	−36	+35	50	36	1
	10177	−36	+23	43	218	1
	10175	+ 6	+10	13	145	3
	10175	+ 8	+11	15	97	7
	10175	+11	+12	18	12	2
	10175	+12	+11	18	436	1
	10168	+32	− 3	32	48	2
	10168	+34	− 3	34	485	2
	10167	+39	+21	44	194	1
	10166	+83	+ 8	83	145	1
	(8)	(261)	(−2)		2,083	28
28.652	10181	−70	+ 3	70	194	1
N O-F	10180	−41	+23	48	73	2
	10180	−36	+23	43	48	2
	10176	−25	+35	45	48	10

Date U.T. Dec.	Mount Wilson group No.	Heliographic Difference in longitude °	Heliographic Latitude °	Distance from center of disk °	Area of spot or group	Spot count
	10177	−23	+24	35	218	1
	10175	+20	+11	25	242	8
	10175	+26	+11	30	436	1
	10168	+45	− 3	45	485	5
	10167	+50	+19	54	194	1
	10167	+57	+23	51	12	1
	10182	+70	− 5	70	267	5
	(8)	(248)	(−3)		2,217	37
29.736	10181	−59	+ 4	59	36	5
MW-G	10181	−57	+ 3	57	170	1
	10180	−24	+22	35	109	40
	10183	−13	+19	27	24	8
	10176	−11	+35	39	16	2
	10177	−10	+24	29	207	1
	10175	+33	+12	36	121	25
	10175	+40	+11	42	388	1
	10168	+59	− 4	59	388	6
	10167	+63	+18	66	16	3
	10167	+64	+19	67	194	1
	10182	+83	− 5	83	291	1
	(9)	(234)	(−3)		1,960	94
30.681	10185	−45	+ 7	46	24	1
NO-G	10181	−43	+ 4	43	194	1

Date U.T. Dec.	Mount Wilson group No.	Heliographic Difference in longitude °	Heliographic Latitude °	Distance from center of disk °	Area of spot or group	Spot count
	10184	−32	+12	35	6	1
	10180	−11	+22	28	145	8
	10180	− 2	+24	26	12	1
	10176	+ 1	+34	36	12	1
	10177	+ 3	+23	26	170	1
	10175	+43	+12	45	85	5
	10175	+52	+11	55	424	1
	10168	+71	− 4	71	339	3
	10167	+78	+19	78	194	1
	(9)	(222)	(−3)		1,605	24
31.665	10185	−31	+ 6	33	121	14
MW-G	10181	−30	+ 4	31	170	1
	10184	−20	+11	25	36	5
	10180	− 4	+22	25	73	15
	10180	− 3	+21	24	170	18
	10180	− 1	+23	26	170	1
	10180	+ 3	+21	24	24	10
	10177	+15	+22	29	170	1
	10175	+55	+13	57	73	1
	10175	+63	+10	64	436	1
	(6)	(209)	(−3)		1,443	67

Mean daily area for 30 days = 1,612
Mean 10 g+s for 30 days = 136.3

DAILY SUMMARY - 1949

A = Area
g = Number of groups
s = Number of spots
r = 10 g+s

Date	A	g	s	r
Jan.				
1.659	1211	7	54	124
2.747	1198	6	30	90
3.647	1233	8	47	127
4.626	1550	8	14	94
5.664	1042	7	9	79
6.658	848	9	17	107
7.662	944	9	35	125
8.699	1321	9	33	123
9.720	1325	11	33	143
10.694	1296	9	44	134
11.696	1379	10	53	153
12.737	1272	7	24	94
13.704	1722	12	58	178
14.688	1550	13	80	210
15.783	1718	10	38	138
16.805	2726	10	46	146
17.830	4181	11	63	173
18.744	5088	11	82	192
20.792	4703	9	45	135
22.663	3204	8	48	128
24.837	2448	5	20	70
27.917	2823	6	33	93
28.751	2465	5	34	84
29.791	1393	5	17	67
30.747	1928	6	47	107
31.787	2652	8	75	155
Feb.				
1.643	2975	9	118	208
2.640	3587	10	104	204
3.637	3839	9	81	171
4.729	3636	9	64	154
5.760	4434	12	88	208
6.826	4420	14	168	308
7.675	3936	14	153	293
8.660	3457	16	138	298
9.707	3427	15	104	254
10.740	3295	17	67	237
11.637	3219	16	121	281
12.685	2699	11	44	154
14.707	3608	16	82	242
15.631	4057	15	173	323
16.663	3924	14	163	303
17.653	3773	13	76	206
18.643	3616	12	74	194
19.690	4161	14	159	299
20.777	3786	14	105	245
21.761	3795	11	67	177
22.708	2716	12	63	183
23.628	3039	13	67	197
24.719	2787	8	38	118
25.629	2908	10	60	160
26.681	2714	7	30	100
27.835	2302	6	26	86
28.757	2460	8	34	114
Mar.				
1.632	3018	11	46	156
2.649	3697	11	38	148
3.758	4457	9	44	134
4.644	4100	11	46	156
5.629	3608	14	58	198
6.685	2614	14	63	203
7.657	3003	12	44	164
8.626	2653	16	57	217
9.684	3004	15	81	231
10.640	2739	12	37	157
11.673	3240	14	72	212
12.645	3378	15	91	241
13.801	4435	14	45	185
14.640	4860	17	48	218
15.874	4475	16	49	209
16.633	4415	16	55	215
17.621	4581	16	54	214
18.778	4931	14	91	231
19.656	4616	13	47	177
20.718	4520	14	39	179
21.639	4882	16	77	237
22.680	3926	13	59	189
23.666	3278	12	53	173
24.638	3622	12	54	174
25.650	2678	12	75	195
26.627	1864	12	43	163
27.626	1542	11	116	226
28.574	1405	11	23	133
29.656	1543	12	33	153
30.637	1553	11	61	171
Apr.				
1.622	1617	12	75	195
2.644	2083	14	70	210
3.779	2083	14	46	186
4.703	2117	16	72	232
6.722	2404	12	105	225
7.743	2384	14	94	234
8.642	2548	15	84	234
9.635	2028	13	45	175
10.646	2022	12	33	153
11.798	2132	12	30	150
12.772	2301	11	49	159
13.584	2362	10	62	162
14.653	1980	13	115	245
15.656	1828	9	81	171
16.630	1880	11	75	185
17.598	2057	13	89	219
18.811	2314	9	62	152
19.633	2464	9	77	167
20.637	2761	11	68	178
21.652	2719	11	85	195
22.665	2564	14	146	286
23.753	1821	13	84	214
24.638	1694	13	46	176
25.642	1847	13	61	191
26.635	1757	10	66	166
27.606	1784	14	100	240
28.657	1647	10	53	153
29.648	1399	8	42	122
30.631	1579	10	34	134
May				
1.598	1362	13	71	201

DAILY SUMMARY - 1949

Date	A	g	s	r
2.589	922	10	70	170
3.635	1308	9	68	158
4.638	1670	10	50	150
5.652	2113	11	73	183
6.641	2114	11	73	183
7.647	1920	14	58	198
8.592	1602	11	93	203
9.652	1756	7	39	109
10.698	1599	7	24	94
11.580	1455	8	45	125
12.644	1114	9	34	124
13.643	777	6	17	77
14.644	798	5	23	73
17.759	1478	7	54	124
18.635	1566	7	60	130
19.645	1289	9	123	213
20.642	1194	8	83	163
21.631	1102	7	50	120
22.812	1272	8	39	119
23.646	1313	12	74	194
24.639	1178	13	58	188
25.639	1016	11	47	157
26.808	1404	11	29	139
27.728	1143	11	49	159
28.656	1239	8	63	143
29.667	1709	7	54	124
30.653	1949	7	44	114
31.646	1683	7	58	128
June				
1.644	1445	9	76	166
2.670	1571	11	60	170
3.650	1466	11	56	166
4.644	1515	12	69	189
5.877	1488	11	29	139
6.563	1609	10	53	153
7.646	811	7	35	105
8.648	1126	9	52	142
9.642	1048	7	34	104
10.664	1514	6	16	76
11.692	1690	8	29	109
12.648	1138	6	28	88
13.642	1174	8	62	142
14.647	1187	6	31	91
15.572	832	5	81	131
16.658	1095	6	71	131
17.561	828	4	50	90
18.565	992	7	36	106
19.861	1082	9	32	122
20.663	1398	10	21	121
21.669	1448	9	26	116
22.647	2127	9	52	142
23.644	1992	9	78	168
24.647	2113	9	51	141
25.643	2313	8	77	157
26.643	2471	10	93	193
27.642	2678	11	102	212
28.563	3453	14	250	390
29.575	3013	15	166	316
30.769	2185	14	85	225
July				
1.578	2014	12	83	203
2.728	1938	10	62	162
3.645	1339	10	59	159
4.647	931	7	55	125
5.647	362	6	25	85
6.649	569	9	54	144
7.565	936	10	90	190
8.673	720	5	23	73
9.660	726	5	15	65
10.584	670	5	31	81
11.668	738	6	13	73
12.792	1121	8	53	133
13.656	1102	6	27	87
14.646	1477	7	64	134
15.801	1581	8	59	139
16.680	1617	8	64	144
17.572	1318	8	69	149
18.644	1310	11	54	164
19.644	1549	13	45	175
20.647	2000	11	56	166
21.645	2005	10	37	137
22.644	1458	10	45	145
23.706	2089	12	50	170
24.659	2310	13	106	236
25.668	2706	14	68	208
26.650	3108	10	54	154
27.651	3556	8	66	146
28.650	3938	7	56	126
29.642	2907	10	130	230
30.644	3105	9	88	178
31.785	2615	7	75	145
Aug.				
1.680	2668	7	64	134
2.692	2440	5	34	84
3.641	2471	6	53	113
4.650	2315	6	45	105
5.650	2557	6	30	90
6.644	1642	5	16	66
7.643	434	5	17	67
8.642	412	4	8	48
9.642	405	4	11	51
10.644	399	6	13	73
11.648	266	2	5	25
12.651	884	5	27	77
13.720	1925	6	45	105
14.578	2355	7	109	179
15.588	2137	9	176	266
16.656	2179	9	107	197
17.677	2204	9	101	191
18.828	2786	9	86	176
19.802	3065	11	104	214
20.649	3220	11	88	198
21.671	3095	12	82	202
22.643	3061	12	95	215
23.730	3052	13	101	231
24.667	3026	13	91	221
25.646	3463	10	137	237
26.750	3174	10	72	172
27.649	3616	12	97	217
29.642	3478	13	110	240
30.672	2937	10	41	141
31.597	3142	12	158	278

DAILY SUMMARY - 1949

Date	A	g	s	r	Date	A	g	s	r
Sept.					Nov.				
1.655	3368	14	93	233	1.622	1222	10	43	143
2.638	2880	13	88	218	2.648	1810	10	30	130
3.666	2430	12	79	199	3.744	2495	8	36	116
4.627	2226	14	165	305	4.683	2386	9	58	148
5.640	2420	15	102	252	5.660	2470	8	123	203
6.642	2056	12	77	197	6.622	2713	9	122	212
7.595	2140	13	184	314	7.630	2617	7	62	132
8.680	2103	12	92	212	8.628	3150	7	94	164
9.647	2261	12	50	170	9.641	3033	10	124	224
10.593	2419	13	137	267	10.660	2459	9	58	148
11.669	3804	12	76	196	11.671	2532	10	62	162
12.649	3821	10	62	162	12.618	2023	9	59	149
13.697	3937	11	73	183	13.626	1962	11	122	232
14.665	3548	10	63	163	14.644	1743	10	81	181
15.639	2943	8	45	125	15.644	1913	10	62	162
16.636	3042	8	67	147	16.722	2822	12	49	169
17.629	2963	10	108	208	17.935	2594	10	62	162
18.701	2398	11	83	193	18.649	3267	12	111	231
19.658	2371	11	56	166	19.629	2948	14	94	234
20.644	2493	12	54	174	20.672	2248	10	65	165
21.635	2276	10	35	135	21.628	2385	10	24	124
22.653	2447	0	55	155	22.621	2206	10	23	123
23.642	1642	9	87	177	23.660	2495	10	44	144
24.598	1488	8	80	160	24.778	2735	12	75	195
25.726	1561	7	38	108	25.625	2592	10	49	149
26.652	1363	7	40	110	26.630	1723	9	40	130
27.619	870	6	45	105	27.638	2341	12	96	216
28.663	691	3	38	68	28.688	2979	14	53	193
29.604	301	2	23	43	29.668	2882	14	39	179
30.660	576	4	35	75	30.657	2833	13	38	168
Oct.					Dec.				
1.629	1684	6	49	109	1.633	2057	13	55	185
2.760	2304	11	84	194	2.759	1851	9	35	125
3.649	2368	9	73	163	3.738	1272	10	50	150
4.635	2910	13	124	254	4.623	1575	10	26	126
5.683	3317	10	173	273	5.741	1404	10	42	142
6.673	3309	8	126	206	6.644	1440	12	54	174
7.682	3260	6	66	126	7.628	1792	7	39	109
8.638	3693	10	91	191	8.629	2132	7	67	137
9.684	3078	11	106	216	9.638	2083	7	47	117
10.646	2871	9	75	165	10.691	1512	7	28	98
11.667	3362	12	112	232	11.658	1496	11	52	162
12.633	2924	14	94	234	12.664	1341	12	83	203
13.599	2263	13	186	316	13.679	1431	13	46	176
14.640	1438	12	133	253	14.640	1416	8	27	107
15.725	1573	10	112	212	15.629	1427	8	33	113
16.710	1255	7	81	151	16.672	1040	9	26	116
17.642	1100	6	50	110	17.727	1076	6	35	95
18.769	738	4	20	60	19.774	1211	7	27	97
19.690	678	4	8	120	20.665	1200	7	19	89
20.653	659	7	32	102	21.754	963	9	22	112
21.633	1078	7	53	123	22.769	1066	10	38	138
22.644	2351	9	60	150	23.647	1445	8	128	208
23.673	1986	8	38	118	24.652	1960	9	48	138
24.731	1622	8	47	127	25.700	2557	11	47	157
25.611	1240	7	54	124	26.726	2318	11	55	165
26.676	872	6	30	90	27.728	2083	8	28	108
27.655	854	10	34	134	28.652	2217	8	37	117
28.619	847	7	24	94	29.736	1960	9	94	184
29.615	1176	9	61	151	30.681	1605	9	24	114
30.613	1230	11	133	243	31.665	1443	6	67	127
31.609	1019	10	60	160					

MONTHLY SUMMARY - 1949

	A	r
January	2047	125.7
February	3429	211.7
March	3421	188.6
April	2075	190.0
May	1415	147.0
June	1627	153.4
July	1736	146.0
August	2294	153.8
September	2295	170.7
October	1905	167.4
November	2463	169.6
December	1612	136.3

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